

REMARKS

This responds to the final Office Action mailed on September 17, 2007.

Claims 1, 8, 9, 18, 26, 31, 34, and 37 are amended herein, claims 7, 22, and 32 are canceled herein, and new claims 40-44 are added herein. As a result, claims 1-2, 5-6, 8-21, 23-31, and 33-44 are now pending in this application.

Allowable Subject Matter

Claims 7-9 and 11-14 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Independent claim 1 has been amended herein to include the subject matter of previous dependent claim 7. Therefore, claim 1 should now be in form for allowance and allowance thereof is respectfully requested.

Previous dependent claim 7 has been canceled.

As described below, all of the other independent claims in the present application have been amended herein to include substantially the same subject matter as previous dependent claim 7. It is believed that these claims are allowable for the same reasons as amended claim 1.

35 USC § 102 Rejection of the Claims

Claims 18-20, 22-26, 29-33, and 37-39 were rejected under 35 USC § 102(e) as being anticipated by *Walton et al.* (US Patent 6,785,341) (hereinafter Walton).

For at least the reasons stated in the previous response, the Applicants respectfully disagree with the above rejection. However, to expedite prosecution of the present application, independent claims 18, 26, 31, and 37 have been amended herein to include subject matter substantially similar to that of previous dependent claim 7. It is submitted that these claims are now in form for allowance. Applicants reserve the right to reintroduce these independent claims in their previous forms in a future application.

Independent claim 18 has been amended to recite **“an adaptive parallel to serial converter to receive output streams from said first and second Fourier transform units and to merge said output streams into a serial stream based on control information received**

from an adaptive channelization controller, said adaptive channelization controller to determine which of said plurality of predetermined frequency sub-channels to use to support a multicarrier wireless link based on channel state information.” Independent claim 26 has been amended to further define “individually transforming” as “wherein individually transforming generates a plurality of output streams that includes at least a first stream for a first frequency sub-channel component in said plurality of frequency sub-channel components and a second stream for a second frequency sub-channel component in said plurality of frequency sub-channel components” and by adding “adaptively parallel to serial converting said plurality of output streams to merge said output streams into a serial stream based on said sub-channel adaptation information.” Independent claim 31 has been amended to recite “converting said frequency domain representations resulting from individually transforming said plurality of frequency sub-channel components to a single serial stream based on control information received from an adaptive channelization controller, said control information identifying which sub-channels within a plurality of available sub-channels are being used for a wireless link.” Claim 37 has been amended to recite “an adaptive parallel to serial converter to receive output streams from said plurality of Fourier transform units and to merge said output streams into a serial stream based on said sub-channel adaptation information.” Thus, all of these claims have been amended to recite an adaptive parallel to serial conversion arrangement that merges various independently transformed data streams to a serial representation based on sub-channel adaptation information. Walton does not disclose or suggest such an arrangement.

Based on the foregoing, it is submitted that claims 18, 26, 31, and 37 are allowable over Walton for at least the same reasons as amended claim 1. Reconsideration and allowance of these claims is therefore respectfully requested.

As stated in the previous response, dependent claims 19-20, 23-25, 29-30, 33, and 38-39 are allowable based on the allowability of their respective base claims and various additional bases for patentability.

Claims 22 and 32 have been canceled without prejudice.

35 USC § 103 Rejection of the Claims

Claims 1, 2, 6, 10, 15, and 37-39 were rejected under 35 USC § 103(a) as being unpatentable over *Catreux* (US Publication 2002/0183010) (hereinafter *Catreux*) in view of Walton.

For at least the reasons stated in the previous response, the Applicants respectfully disagree with the above rejection. However, as described above, to expedite prosecution of the present application, independent claim 1 has been amended herein to include the subject matter of previous dependent claim 7 and should thus be allowable. Applicants reserve the right to reintroduce independent claim 1 in its previous form in a future application.

In addition, as described above, independent claim 37 has been amended in a similar manner to independent claim 1. That is, claim 37 has been amended to recite **“an adaptive parallel to serial converter to receive output streams from said plurality of Fourier transform units and to merge said output streams into a serial stream based on said sub-channel adaptation information.”** Neither *Catreux* nor Walton disclose or suggest such a converter.

Based on the foregoing, it is submitted that claims 1 and 37 are allowable over the combination of *Catreux* and Walton. Reconsideration and allowance of these claims is therefore respectfully requested.

As stated in the previous response, dependent claims 2, 6, 10, 15, and 38-39 are allowable based on the allowability of their respective base claims and various additional bases for patentability.

Claim 5 was rejected under 35 USC § 103(a) as being unpatentable over *Catreux* in view of Walton and further in view of *Hammerschmidt* (US Publication 2004/0151145) (hereinafter *Hammerschmidt*).

Claim 5 is a dependent claim that depends directly from independent claim 1. Consequently, claim 5 is allowable for at least the same reasons as claim 1.

Claims 16-17 were rejected under 35 USC § 103(a) as being unpatentable over *Catreux* in view of Walton and further in view of *Hammerschmidt*.

Claims 16-17 are dependent claims that depend either directly or indirectly from independent claim 1. Consequently, these claims are allowable for at least the same reasons as claim 1.

Claim 21 was rejected under 35 USC § 103(a) as being unpatentable over Walton in view of Hammerschmidt.

Claim 21 is a dependent claim that depends directly from independent claim 18. Consequently, this claim is allowable for at least the same reasons as claim 18.

Claims 27 and 28 was rejected under 35 USC § 103(a) as being unpatentable over Walton in view of Hammerschmidt.

Claims 27-28 are dependent claims that depend directly from independent claim 26. Consequently, these claims are allowable for at least the same reasons as claim 26.

Claims 34-36 was rejected under 35 USC § 103(a) as being unpatentable over Walton in view of *Maltsev et al.* (US Publication 2004/0190637) (hereinafter Maltsev).

For at least the reasons stated in the previous response, the Applicants respectfully disagree with the above rejection. However, to expedite prosecution of the present application, independent claim 34 has been amended herein to include the same subject matter that was added to claim 1 (i.e., the subject matter of previous dependent claim 7). Thus, claim 34 now has all of the same elements of amended claim 1 and should be allowable for at least the same reasons.

Based on the foregoing, it is submitted that claim 34 is allowable over the combination of Catreux and Walton. Reconsideration and allowance of these claims is therefore respectfully requested.

Claims 35 and 36 are dependent claims that each depend directly from independent claim 34. Consequently, these claims are allowable for at least the same reasons as claim 34.

New Claims

New dependent claims 40-44 have been added herein. Claims 40 and 41 are dependent from independent claim 18, claims 42 and 43 are dependent from independent claim 26, and claim 44 is dependent from independent claim 34. These claims are thus allowable for at least the same reasons as their respective base claims. These claims also provide further bases for

patentability. For example, claims 40 and 42 are allowable for similar reasons to dependent claim 8 which was identified as being allowable if rewritten to include all of the limitations of the base claims and any intervening claims. Similarly, claims 41, 43, and 44 are allowable for similar reasons to dependent claim 9 which was identified as being allowable if rewritten to include all of the limitations of the base claims and any intervening claims.

The final office action relies upon at least one 35 USC § 102(a) or 35 USC § 102(e) reference. Please note that no part of the present response is to be deemed an admission that any such reference is valid prior art in the present application. As such, the Applicants reserve the right to swear behind any such reference at a later date.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (480-948-3745) to facilitate prosecution of this application.

Respectfully submitted,

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By their Representatives,

CUSTOMER NUMBER: 45643

480-948-3745

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 15th day of November, 2007.

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